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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,234	06/29/2001	Patrick Joseph Bohrer	AUS920010123US1	8647

7590

01/22/2004

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EXAMINER

CHEN, TE Y

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,234

Applicant(s)

BOHRER ET AL.

Examiner

Susan Y Chen

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

This is in response to amendment filed on 11/11/2003

Claims 1 - 21 are pending for examination, claims 1, 2, 10, 11 and 18 are amended, claims 22-24 are deleted.

A telephone interview has been conducted between applicant's attorney -- Joseph Lally and the examiner on 1/14/2004. Claims 1, 10 and 18 are discussed in the telephone interview. At the conversation, the attorney admitted that the amended claims (e.g., claims 1 and 10) filed on 11/11/2003 do not reflect the features of instant invention and would amend the claims to reflect the distinct features of the instant invention. As such, the examiner gives the following rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 10-14, are rejected under 35 U.S.C. 102(b) as being anticipated by Tzelnic et al. (6,061,504).

As to claims 1-2 and 10-11, Tzelnic et al. (hereinafter referred to as Tzelnic) discloses a data processing system with means, method and program product to perform the following functions as claimed by applicant, comprising:

- * to determine and resolve the difference of network transfer rate for a set of clients/servers on the TCP network connection [e.g., see Fig(s). 4-6, 14; col. 6, lines 24-32; the pre-staging processing of col. 6, lines 34-43; col. 7, lines 48-52; col. 8, lines 16-22; lines 26-35; line 39-45; line 55- col. 9, lines 13]; and

- * retrieving a portion of the requested data from a disk via a server in responsive to a client request via the network connection [e.g., see col. 7, lines 48-52];

- * initiating transmission of the first part of data to the client via the network [e.g., see the advanced prefetch scheduling at col. 20, lines 30-50; the modules 171-176, Fig. 17];

- * calculating the time required to transmit the portion of data to the client based on the network transfer rate [e.g., see Fig(s). 14-15; col. 20, line 58 – col. 22, line 26];

- * determining when to retrieve a subsequent portion of the requested data from the disk, based on whether the calculated time is expired [e.g., see col. 12, lines 26-43].

As to claims 3 and 12, the claimed feature to retrieve a first block for retrieving a first portion of the requested data is a standard default disk operation.

As to claims 4 and 13, Tzelnic further discloses the claimed feature: delaying retrieval of subsequent portion until the calculated time is expired to minimize the server memory required for completing the file request [see Tzelnic: col. 12, lines 44-67].

As to claims 5 and 14, Tzelnic further discloses the claimed feature: determining when to retrieve the subsequent portion based on the distance between the current head position and the disk location of the subsequent portion of data [e.g., see Tzelnic: col. 20, lines 30-36, line 38-50].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9, 15-17 and 18-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzelnic et al. (6,061,504) in view of Henson et al. (U.S. Patent No. 5,465,343) and further in view of Kataoka Nobuhiro (JP357125452A).

As to claims 6-9, 15-17 and 18-21, Tzelnic discloses all the features as recited in claims 1-5 and 10-14 above, he further discloses the system has at least one disk [e.g. the integrated cached disk array storage subsystem (23), Fig. 1] coupled to a plurality

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of network servers [e.g., the media server (20), the stream server(21), etc. Fig. 2] to perform the steps cited in claims 1-5 and 10-14.

However, he did not expressly disclose: 1) the system monitoring the position of the disk head while the first part of data is being transmitted to the client; and 2) retrieving the data associated with subsequent request based on if the data is closer to the current position of a disk head than the data for the subsequent portion of the next request.

However, Henson et al. (hereinafter referred as Henson) disclosed the first system monitoring feature as claimed by applicant [e.g., the micro-controller at col. 3, line 58 – col. 4, line 2].

Furthermore, Kataoka Nobuhiro expressly discloses a data storage system that retrieves data associated with subsequent request if the data is closer to the current head position than the data associated with the subsequent portion of the first file request [e.g., see Kataoka Nobuhiro: Abstract lines 1-3].

Thus, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to modify Tzelnic's system admission control policy [col. 2, line 31-35, lines 51-59] with the monitor (or the micro-controller) processing as taught by Henson, because by doing so, the modified stream servers would permit a supervising processing, which monitors the flow of absolute position data and user data blocks to and from the disk via the head structure and verify the integrity of, or correcting errors in data retrieved from the disk.

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In addition, one ordinary skilled artisan at the time the invention was made can further modify the disk head position monitoring processing of the combined system for retrieving the subsequent data portion from a nearest sector to the current disk head position in respond to the subsequent file request as taught by Kataoka Nobuhiro, because by do so, the system can minimize I/O latency time and maximize the system throughput.

As to claims 7-9 and 16-17, except all features discussed above, the combined system of Tzelnic, Henson and Kataoka Nobuhiro further disclose that the retrieving of a subsequent portion of data for the next request is based on the determination of the head position and the expiration time associated with the file request [e.g., see Henson: the data transducer head, col. 7, line 61 - col. 8, line 1; col. 10, lines 9-22; Tzelnic: col. 12, lines 26-43].

Conclusion

To expedite the process of re-examination, the examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues (e.g. 35 U.S.C. 112) set forth by the Examiner prior to the office action, that applicant should provide and link to the most specific page and line numbers of the disclosure where best support is found (see 35 U.S.C. 132).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Chen, whose telephone number is (703) 308-1155. The examiner can normally be reached Monday through Friday from 7:30 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached at (703) 308-1436. The fax phone numbers for this group is : (703) 872-9306.

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Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Susan Chen

Jan 15, 2004

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